Noise Problems with Aircraft

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By doing some research on the topic of "Noise Increase for Single-Engine Propeller-Driven Small Airplanes" we have found some remarkable evidence that might change the thoughts behind the issue. If the docket No. FAA-2004-17041 is passed it might save hearing in student pilots and recreational pilots , cut down on the noise around the airport, but at the same time it will cost aircraft owners a substantial amount of money to change their aircraft to meet the new regulations.

Since the Committee on Aviation and Environmental Protection took the liberty of forming a task group that studied the impact of propeller-driven small airplane noise, they determined that the majority of the aircraft that would be affected are pilot training aircraft. With the information provided by the task group, it is easier to determine who will be affected if the proposed rule would pass. This means that almost everyone who operates a general aviation aircraft, regardless of the reason will have to change the way they operate if this rule is passed. If the docket would pass pilots, from student to commercial, would not have the myriad hearing problems associated with aircraft noise. Nor would the people living in close proximity to airport have to deal with current decibel levels of noise pollution near their homes the reason for this is that airplanes would have newly designed, quieter types of propellers installed on them lowering the decibels of noise coming from the propeller. On the other hand, it will cost the aircraft owner and operator

munificent amounts of money to do so. The problem is that many aircraft owners who would not be willing to purchase a new propeller for their personal aircraft if they only fly on the weekend or for occasional business trips once or twice a month. Another consideration is for the person who owns a fleet of aircraft. It is unlikely that they would be able to or willing to purchase all new propellers. This docket could increase financial stress on the person or business possibly resulting in putting them out of business. A person who is involved in aviation and supports themselves and their families could face dire consequences with the initiation of this NPRM. It is a serious situation when one is facing the purchase of thousands of dollars worth of aircraft components that are not needed. The Federal Aviation Administration claims that the majority of general aviation aircraft that are already in production meet the proposed rule, but for the aircraft that are already in operation, the only option for aircraft owners is to apply for a Supplemental Type Certificate. In the proposed rule, the FAA makes it sound like Supplemental Type Certificates do not cost any money, but that is not the case.

Putting extremely strict operational limitations on aircraft is a great idea to reduce propeller noise, but sometimes physics demands high engine RPM, for example during takeoff when the propeller is producing the most noise. What if the problem did not concern changing the propellers but installing more efficient mufflers on the exhaust system? The solution to higher decibels might be less expensive and consequently

and easier method to comply with the NPRM. This solution might be palatable for the aircraft owners that only fly on the weekends. It will also help the aircraft owners who own a fleet of planes. Some of the research that we have done indicates that a substantial amount of the noise heard in the aircraft cabin is from the exhaust system. The exhaust gases in single engine aircraft exit below the rudder peddles and the noise can be heard in the cabin rather easily.

"The task group was also asked to recommend remedies to reduce environmental impact depending on the study results, such as a stringency increase, operational limitations, and economic incentives" (Department of Transportation [Docket No. FAA-2004-17041]). In that the task group seems to have determined that training aircraft are the greatest segment to be affected, it might be prudent for the airman training companies to review and comment on this NPRM.

"This proposed rule would make the FAA's single-engine propeller-driven small airplanes noise regulation more consistent with international standards." (Department of Transportation [Docket No. FAA-2004-17041]) Why should aircraft owners in the United States have to conform to the regulation of JAA (Joint Aviation Authorities)? The regulation that they portray are too stringent then what they need be. One thing that could be a positive outlook for the new regulations would to grandfather all of the old aircraft that does not meet the new regulations standards.

Then make all of the companies that are producing new aircraft conform to the new regulation standards

Some of issues that were brought up while writing this paper are good and bad. One thing to consider is how much aircraft owners are going to be affected by this NPRM. Another to consider is the international regulations to strict on their aircraft owners. While these regulations are being tabled, several different issues need to be discussed before any serous action needs to take place that would hurt an abundant amount of people.

Works Citied

Wilkinson, S. (n.d.) *Aircraft Noise*, Retrieved March 11, 2004, From http://www.wolf-aviation.org/aircraft_noise.htm